

PATENT
147261 (SPLG 1096)IN THE CLAIMS

1. (currently amended) An ultrasound probe comprising:

a first chamber;

a second chamber;

a sealing member between the first and second chambers; and

a single connection member within only the second chamber having a rigid portion and a flexible portion, the rigid portion forming at least part of the sealing member.
2. (original) An ultrasound probe in accordance with claim 1 wherein the sealing member comprises a wall between the first and second chambers.
3. (original) An ultrasound probe in accordance with claim 1 wherein the first chamber is a dry chamber and the second chamber is a wet chamber.
4. (original) An ultrasound probe in accordance with claim 1 wherein the connection member comprises a printed circuit board.
5. (original) An ultrasound probe in accordance with claim 1 wherein the rigid portion comprises a rigid printed circuit board and the flexible portion comprises a flexible printed circuit board.
6. (original) An ultrasound probe in accordance with claim 1 wherein the rigid portion is configured to connect to a system cable in the first chamber and the flexible portion is configured to connect to a transducer array in the second chamber.
7. (original) An ultrasound probe in accordance with claim 1 wherein the rigid portion is configured to connect to a system cable in the first chamber and the flexible portion is configured to connect to a transducer array in the second chamber, the transducer array provided as part of a scan head configured to move within the second chamber.

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8. (original) An ultrasound probe in accordance with claim 1 wherein the rigid portion is integrally formed with the sealing member.

9. (original) An ultrasound probe in accordance with claim 1 wherein the rigid portion is sealingly engaged with the sealing member.

10. (original) An ultrasound probe in accordance with claim 1 further comprising an interconnection member to connect the rigid portion to a system cable within the first chamber.

11. (currently amended) An ultrasound probe in accordance with claim 1 wherein the sealing member ~~comprise~~ comprises at least one opening.

12. (original) An ultrasound probe in accordance with claim 1 wherein the first and second chambers are formed in a unitary construction.

13. (original) An ultrasound probe in accordance with claim 1 wherein the first and second chambers are formed in a modular construction.

14. (original) An ultrasound probe in accordance with claim 1 wherein the ultrasound probe is configured to operate in at least one of a 1D, 1.25D, 1.5D, 1.75D and 2D mode of operation.

15. (original) An ultrasound probe comprising:

a dry chamber having drive means for mechanically controlling at least one transducer and communication means for electrically controlling the at least one transducer; and

a wet chamber having a connection member formed of a rigid portion and a flexible portion, the rigid portion forming at least part of a wall between the wet and dry chambers and configured to connect to the communication means, and the flexible portion configured to connect to the at least one transducer.

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16. (original) An ultrasound probe in accordance with claim 15 wherein the communication means comprises a system cable.

17. (original) An ultrasound probe in accordance with claim 15 wherein the drive means comprises a motor and gear arrangement.

18. (original) An ultrasound probe in accordance with claim 15 wherein the connection member further comprises a printed circuit board.

19. (original) An ultrasound probe in accordance with claim 15 wherein the dry and wet chambers are configured to connect in a modular arrangement.

20. (currently amended) A connection member for an ultrasound probe, the connection member comprising:

a flexible portion within only a wet chamber configured to connect to at least one transducer; and

a rigid portion forming at least part of a sealing member between the wet chamber and a dry chamber, the rigid portion configured to connect to a system cable in the dry chamber.

21. (original) A connection member in accordance with claim 20 wherein the flexible portion and rigid portion each comprise a printed circuit board.

22. (currently amended) A method for controlling an ultrasound probe, the method comprising:

communicating between at least one transducer array and a host system via a connection member, the connection member formed of a rigid portion and a flexible portion, the flexible portion entirely within a wet chamber and configured to connect to the at least one transducer array, the rigid portion forming at least part of a wall between a the wet chamber having the at least one transducer array therein and a dry chamber having a system cable therein, the rigid portion configured to connect to the system cable, with the system cable connected to the host system; and

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controlling elements of the at least one transducer array with the communicating.

23. (original) A method in accordance with claim 22 wherein the connection member comprises a printed circuit board.